# Abstract

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Title of Thesis: Energy evaluation of compaction process of directly compressible isomalt.

The thesis was dealing with energy evaluation of compaction process of directly compressible isomalt galenIQ$^{TM}$ 720 and galenIQ$^{TM}$ 721. Tablets were compressed with material testing machine T1-FRO 50 Th.A1K Zwick/Roell, which coupled with computer software named testXpert V 9.01 shown and drawn records of „force-displacement“ and enumerate particular energy of compaction process that means energy of fiction ($E_1$), energy accumulated by the tablet ($E_2$), energy of decompression ($E_3$) and plasticity.

From comparison of both substances results, that higher energy of friction, higher energy of accumulated by the tablet and higher plasticity showed galenIQ$^{TM}$ 721, but in the value of decompression energy was not statisticaly signifiant diference between dry binders. Both dry binders it was not accepted for that with rising energy acumulated in the tablet have risen tensile strength of tablets. In terms of comparison drugs were higher values of friction energy with decompression energy in tablets with acetylsalicylic acid, values of energy acumulated by the tablet and plasticity were in case of this drug lower than in case of ascorbic acid. Tablets with acetylsalicylic acid, dry binder galenIQ$^{TM}$ 720 and 1% lubricant provided the hightest tensile strength tablets with the lowest contain of accumulated energy.